MICROTITYUS DOMINICANENSIS: A NEW SCORPION FROM THE DOMINICAN REPUBLIC, WEST INDIES (SCORPIONES: BUTHIDAE)[1]

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ABSTRACT: *Microtityus dominicanensis* is described from the Dominican Republic, West Indies. A single adult female is the first member of the genus *Microtityus* to be reported from the island of Hispaniola.

The genus *Microtityus* Kjellesvig-Waering, 1966 is known from eight species: *M. vanzolinii* Lourenço and Eickstedt, 1983 from Brazil; *M. biordi* González-Sponga, 1970 and *M. joseantonioi* González-Sponga 1982 from Venezuela; *M. rickyi* Kjellesvig-Waering, 1966 (type species) from Trinidad, (see also Vachon, 1977); *M. waeringi* Franke and Sissom, 1980 from the U.S. Virgin Islands; and *M. fundorai* Armas, 1974, *M. jaumei* Armas, 1974 and *M. trinitensis* Armas, 1974 from Cuba. The report of an undescribed *Microtityus* from Puerto Rico (Armas, 1974) is incorrect (Armas, pers. comm., González-Sponga, pers. comm.).

In this paper a new species of *Microtityus* is described from the Dominican Republic.

Morphological nomenclature is modified from that used by Francke and Sissom (1980), Stahnke (1970), and Williams (1980) especially on pedipalp keels; except for trichobothriotaxy which follows Vachon (1974).

Microtityus dominicanensis n. sp.
(Figs. 1-12, Map. Fig 13)

Type data: Female holotype from Cajuelito Alto, Dominican Republic, Hispaniola (date and collector unknown) deposited in the collection of the California Academy of Sciences (C.A.S.).

Etymology: Named after the Dominican Republic, Hispaniola.

Diagnosis: Adult female about 17 mm in total length; coloration pale yellowish brown with browh mottlings throughout. Pedipalp with eleven femoral trichobothria; prolateral keel on pedipalp tibia irregularly serrato-crenulated. Pedipalp movable finger with 10 primary denticle rows plus one apical subrow; fixed finger with 10 rows and no apical subrow. Mesosomal terga tricarinated. Pecten with 8 teeth. Telson bearing 5 moderately developed crenulated keels; subaculear tooth well developed.

Description: Based on adult holotype ♀. Measurements in Table 1.

Prosoma. Carapace pale yellowish-brown with brown mottlings throughtout; small and

[1]Received November 15, 1983. Revision received June 8, 1984. Accepted August 11, 1984.

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moderately sized tubercles abundant throughout; anterior margin subtly crenulated; anteromedian and posteromedian keels poorly developed, superciliary keels moderately developed, all bearing small tubercles; anterior, medianocular, laterocular, posteromedian, posterior, and posterolateral furrows relatively shallow and wide. Details of carapace as in Fig. 3.

Chelicera basal piece dorsally pale yellowish-brown, distally brown in mottled pattern, bearing several small tubercles; fingers pale yellowish-brown except basal fourth of movable finger with brown mottling dorsally. Dentition typical of the family, as in Fig. 4.

Pedipalp femur brown with pale yellowish-brown mottlings except ventrally with pale yellow throughout; bearing five poorly to moderately developed keels ventroprolaterally, prolaterally, dorsoprolaterally, dorsoretrolaterally, and retrolaterally, ventroprolateral keels relatively smooth, others crenulated; dorsal interkeel area with small tubercles, others only finely granulated. Dorsal and retrolateral trichobothriotaxy and femur details as shown in Fig. 5. **Tibia** coloration as femur; bearing six poorly developed keels prolaterally, dorsally (2), dorsoretrolaterally, retrolaterally, and ventroretrolaterally, ventroretrolateral smooth, prolateral irregularly serrato-crenulated, others regularly crenulated; interkeel areas finely granulated. Dorsal and retrolateral trichobothriotaxy and details of tibia as in Figs. 6-7. **Chela palm pale** yellow except for a transversal interrupted medial brown band, absent ventrally; bearing seven smooth to repand, moderately developed keels (exterior ventral, inner infradigital, digital, exterior infradigital and three exterior secondary). **Fingers** slightly darker than palm; movable finger wth 10 primary denticle rows and one apical subrow; fixed finger with 10 rows, apical subrow lacking. This specimen has a malformation consisting of a slight concavity close to the base of the movable finger (Fig. 8, arrow head). Trichobothriotaxy and chela details as in Figs. 8-10.

Legs pale yellowish-brown mottled with brown except retrolaterally; distal prolateral condyle of femur and tibia pale brown; femora and tibiae with poorly developed keels, keels absent retrolaterally.

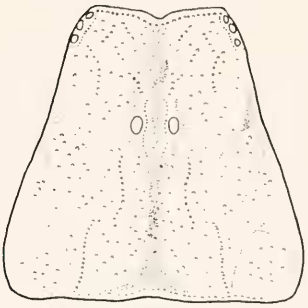
Sternum brown, except pale yellow at posterior medial section, coinciding with a furrow.

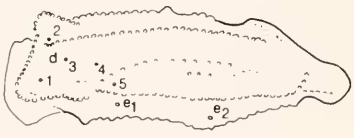
Mesosomal terga pale yellowish-brown with brown mottling especially abundant on digital half; tergum I monocarinated, II-VI tricarinated, VII pentacarinated; all keels visible on tergal distal half. Genital opercula, pectinal marginal lamellae, and posterior margin of basal piece with brown mottlings; posterior margin of basal piece not spatulated; pectinal teeth count 8-8 (Fig. 11). Sterna pale yellowish-brown with brown variegated pattern; III-VII granulated; VI-VII tetracarinated, laterals keels bearing about five tubercles, submedial keels with about 10 tubercles.

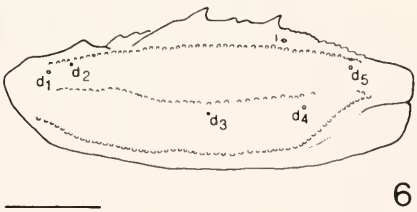
Metasoma pale yellowish-brown, variegated with brown; slightly wider anteriorly; metasomal segment I and II bearing 10 keels located ventrally, ventrolaterally, laterally, dorsolaterally and dorsally, in pairs, III and IV bearing 8 keels located ventrally, ventrolaterally, dorsolaterally and dorsally, in pairs; V bearing 5 keels located ventrally (1), ventrolaterally, and dorsolaterally, both in pairs, all keels moderately developed and serrated; interkeel areas moderately granulated. Telson pale yellow with brown macules; with five moderately developed, crenulated keels; subaculear tooth well developed (Fig. 12).

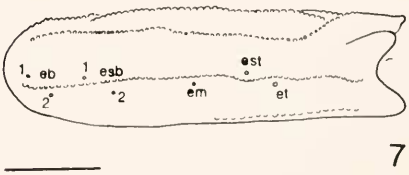
REMARKS AND GEOGRAPHICAL DISTRIBUTION

Microtityus dominicanensis can be distinguished from *M. vanzolinii, M. rickyi* and *M. biori* by having 3 dorsal mesosomal keels instead of 5; from *M. fundorai, M. jaumei, M. trinitensis* and *M. joseantonioi* by having 11 instead of 10 femoral trichobothria; and from *M. waeringi,* to which it will key out in a key to the species published earlier (Lourenço and von Eickstedt, 1983), by having 10 primary denticle rows plus one apical subrow on the pedipalp movable finger, 8 pectinal teeth, and a well

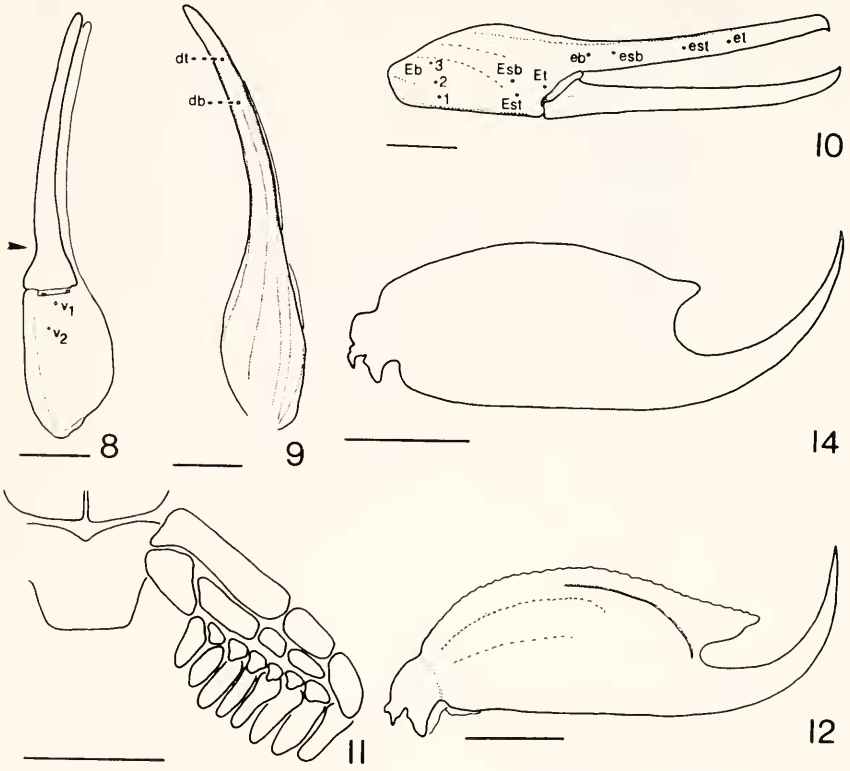


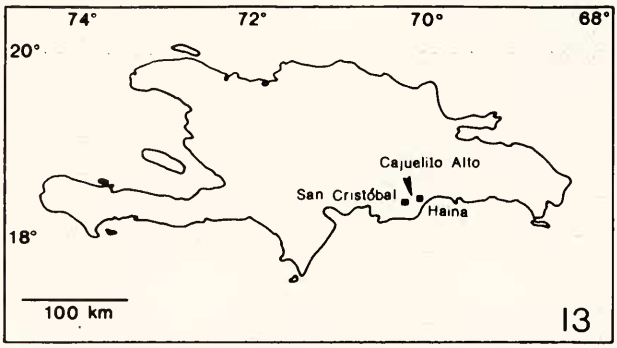






Figs. 1-12. *Microtityus dominicanensis* ♀ holotype. 1-2 Overall views: 1. Dorsal, 2. Ventral. 3. Carapace. 4-6 Dorsal aspects of right side: 4.Chelicera. 5. Pedipalp femur, 6. Pedipalp tibia. 7. Retrolateral aspect of right pedipalp tibia. Figs. 1,2, scale line = 5 mm; 3-12, 14, scale line = 0.5 mm.





Figs. 8-10. Right pedipalp chela manus aspects: 8. Ventral (arrow head points malformation) 9. Dorsal, 10. Retrolateral. 11. Pectinal area. 12. Telson.

Fig. 13. Map of Hispaniola showing location of collection site (Cajuelito Alto).

Fig. 14. *Microtityus waeringi* Francke and Sissom. Telson.

developed subaculear tooth, instead of 9 primary denticle rows plus one apical subrow, 9-11 pectinal teeth (female), and a less developed subaculear tooth (Figs. 12, 14).

Table 1. Measurements of *Microtityus dominicanensis* ♀ Holotype.

Character	Measurements (mm)
Prosoma	
Carapace	
Anterior, median, posterior widths	1.12, 1.60, 2.30
Diad width	0.40
Median, diad-front margin lengths	2.18, 0.74
Chelicera	
Basal piece width, fixed finger length	0.48, 0.10
Pedipalp	
Femur length, width, depth	1.81, 0.55, 0.56
Tibia length, width, depth	2.17, 0.80, 0.68
Palm length, width, depth	1.32, 0.78, 0.71
Underhand, movable finger lengths	1.02, 2.17
Sternum	
Length, anterior, posterior widths	0.60, 0.30, 0.40
Mesosoma	
Terga	
I Length, width	0.30, 2.20
II Length, width	0.35, 2.15
III Length, width	0.48, 2.20
IV Length, width	0.65, 2.30
V Length, width	0.70, 2.30
VI Length, width	0.80, 2.20
VII Length, anterior, posterior widths	1.12, 2.02, 1.20
Overall length	4.80
Metasoma	
Segments	
I Length, width, depth	0.87, 1.26, 1.28
II Length, width, depth	1.36, 1.26, 1.20
III Length, width, depth	1.32, 1.18, 1.20
IV Length, width, depth	1.66, 1.18, 1.18
V Length, width, depth	2.41, 1.06, 1.06
Telson	
Vesicle length, width, depth	1.39, 0.83, 0.76
Aculeus length	0.66
Total length	16.65

Microtityus dominicanensis is known only from Cajuelito Alto, Dominican Republic. This region, located at 0-100 m above sea level, is characterized by a 1000-1500 mm mean annual precipitation, and 24-26°C mean annual temperature (Fig. 13). The single specimen was not labeled with details regarding collection habitat.

The efforts to decipher the almost unreadable original label almost failed. However, a comparison of the interpretation done by an expert in doubtful documents of the government of Puerto Rico with perfectly legible labels from lots of the same batch almost coincide. Therefore, the collection place was assumed to be the same. Original label and additional documentation deposited at the C.A.S.

ACKNOWLEDGMENTS

I wish to thank the experts in the analysis of documents, S. Rivera, O. Colon, and M. Maeso, and other individuals who tried to decipher the original label, Oscar F. Francke and James C. Cokendolpher (Texas Tech University), and two anonymous reviewers who read the manuscript and provided valuable criticism. J. Carrasquillo and M. Hernández typed the manuscript.

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